

Appl. No. 10/605,611  
Amdt. dated July 22, 2005  
Reply to Office action of June 24, 2005

**Amendments to the Specification:**

1. Please substitute paragraph 0014 as follows:

5 In accordance with the present invention, there is provided an air permeable composite film comprising a polymer layer having a top face and a bottom face and a sealing layer that covers the top face of the air permeable composite film. The polymer layer is subjected to an impression process and is perforated to form a plurality of normally substantially closed gaps thereon. After performing a thermal process, the molten sealing layer fills the gaps.

2. Please substitute paragraph 0030 as follows:

10 Please refer to Fig.2A to Fig.2C. Fig.2A to Fig.2C are cross-sectional diagrams of air permeable structures 102 after performing an impression process according to the present invention. These figures are in respective combination with Figs.1A to Fig.1C. The structures 100 in Fig.1A to Fig.1C are partially or totally perforated by virtue of an impression process in a direction from the top face 12 to the bottom face 14, which forms  
15 a plurality of tiny and normally substantially closed gaps 15 on the structures 102 in Fig.2A to Fig.2C. After the impression process, the structures 100 in Figs.1A to 1C are permanently damaged, forming the structures 102 in Figs.2A to 2C, respectively. As shown in Fig.2A to Fig.2C, each of the gaps 15 comprises two edges physically in contact with each other to form a substantially closed gap 15 when a pressure difference between  
20 the two sides of the structure 102 is approximately zero. At that time, the gaps 15 are approximately closed (pseudo-closed) and the surface of the structure 102 has a pseudo-planar topography with multiple phases. When the structure 102 swells due to external pressure, the gaps 15 enlarge and become air permeable, and restore again when the external pressure is removed.

25 3. Please substitute paragraph 0034 as follows:

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Preferably, the sealing layer 16 is made of a material selected from a group comprising lipids, oleaginous materials, wetting agents, surfactants, fatty acids and their derivatives, starch, or amyloid materials and their derivatives, palm waxes, paraffin waxes, micro-crystalline waxes, beeswax, rice bran waxes, synthetic polyethylene (PE) waxes, synthetic polypropylene (PP) waxes, synthetic polyethylene oxide (PEO) waxes and polyolefin. When the composite film structure 102 comes into contact with hot air, the heat of the hot air will degrade the sealing ability of the sealing layer 16, opening the ~~pseudo-closed~~ substantially closed gaps 15, and the hot air can easily permeate through the sealed gaps 15 of the polymer composite layer when the air pressure exerted by the hot air on the first side of the composite film is greater than the air pressure on the other side of the composite film structure 102. On the other hand, when the heating source is removed, the temperature of the composite film structure 102 decreases and the sealing layer 16 regains its sealing abilities. The sealing layer 16 used to fill the gaps 15 can be formed either before or after the impression process.

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